1.0 INTRODUCTION

On September 15, 2006, Transwestern Pipeline Company, LLC (Transwestern) filed an application with the Federal Energy Regulatory Commission (Commission or FERC) under section 7(c) of the Natural Gas Act (NGA) and Parts 157 and 284 of the Commission's regulations. The application was assigned Docket No. CP06-459-000 and was noticed in the Federal Register (FR) on September 27, 2006. Transwestern is seeking a Certificate of Public Convenience and Necessity (Certificate) from the FERC to construct, own, and operate an expansion of its existing interstate natural gas pipeline system.

The vertical line in the margin identifies text that has been modified in this final environmental impact statement (EIS) and differs from the corresponding text in the draft EIS.

Transwestern's proposal, referred to as the Phoenix Expansion Project, would involve the construction and operation of approximately 24.6 miles of 36-inch-diameter loop[1] (San Juan Lateral Loops A and B) in San Juan and McKinley Counties, New Mexico; approximately 259.3 miles of 42- and 36-inch-diameter lateral[2] pipeline and auxiliary facilities from Transwestern's existing mainline in Yavapai County, Arizona to the Phoenix, Arizona area (the Phoenix Lateral); approximately 1.4 miles of 6- to 24-inch-diameter lateral pipeline (customer laterals) to connect the Phoenix Lateral to customer facilities in Maricopa and Pinal Counties, Arizona; piping modifications at the existing Bloomfield Compressor Station in San Juan County, New Mexico; and pressure control valves at the existing Seligman Compressor Station No. 1 in Mohave County, Arizona. The proposed pipeline facilities would be collocated with existing pipeline or powerline rights-of-way for the majority of their length. In addition to construction of the new facilities described above, Transwestern seeks Certificate authority to acquire an undivided ownership interest in the existing East Valley Lateral, a 36.7-mile-long, 24-inch-diameter pipeline located in Pinal and Maricopa Counties, Arizona.

The environmental staffs of the FERC; the U.S. Department of the Interior, Bureau of Land Management (BLM); the U.S. Department of Agriculture, Forest Service (FS); the U.S. Department of Transportation (DOT), Office of Pipeline Safety (OPS); the U.S. Department of the Interior, Bureau of Indian Affairs (BIA); and the Navajo Nation, collectively referred to as the Agency Staffs, have prepared this final EIS to assess the environmental impacts associated with the construction and operation of the facilities proposed by Transwestern in accordance with the requirements of the National Environmental Policy Act (NEPA).

Transwestern proposes to begin construction in the fall of 2007 and place the project facilities in service by the fall of 2008. The proposed project facilities and schedule are described in detail in section 2.0.

1.1 PROJECT PURPOSE AND NEED

The goal of the proposed Phoenix Expansion Project is to serve the increasing demand for energy in the fast-growing Phoenix area. While some of the natural gas provided by the project would directly serve the heating and cooling needs of individual homes and businesses, most of the project's capacity would be used by local utility companies to generate electricity.

[1] A loop is a segment of pipeline that is usually installed adjacent to an existing pipeline and connected to it at both ends. The loop allows more gas to be moved through the system.

[2] A lateral pipeline typically takes gas from the main system to deliver it to a customer, local distribution system, or another interstate transmission system.

The Phoenix Expansion Project is designed to transport natural gas from the Rocky Mountain and San Juan Basins by way of Transwestern's existing San Juan Lateral and mainline system. Currently, the Phoenix area, which is one of the fastest-growing regions in the country, is served by a single natural gas infrastructure system, that of El Paso Natural Gas Company (EPNG). The Phoenix Expansion Project would not only help to satisfy the increasing demand for electricity and natural gas, but would also increase competition in the regional energy market, thereby working to stabilize costs to the consumer.

More specifically, the objectives of the proposed project are to:

- expand the Transwestern pipeline system to allow for the delivery of up to 500 million cubic feet per day (MMcfd) of natural gas to customers in the Phoenix, Arizona area;
- add natural gas supply reliability and flexibility to customers in central and southern Arizona; and
- provide an alternative source of competitively priced natural gas to Arizona markets from supplies in the San Juan and Rocky Mountain Basins.

According to the U.S. Census Bureau, the population in the Phoenix metropolitan area grew by 34.3 percent between 1990 and 2000, the fastest growth rate among the 10 largest U.S. cities during that period. In that same period, the population in Maricopa County grew by 44.8 percent. The Arizona Corporation Commission (ACC), which is an elected body responsible for regulating public utilities in Arizona, estimates that electricity generation in the States of Arizona, New Mexico, and Nevada will increase nearly 50 percent by 2009, with the majority of that increase being fueled by natural gas. Accordingly, the ACC is considering mechanisms to encourage utilities to invest in the infrastructure needed to provide additional natural gas supplies and thereby meet the projected demand for electricity.

Nationally, demand for natural gas is expected to increase by 2 percent per year. The increased demand has been driven primarily by the nation's recent dramatic economic growth which has been relying heavily upon gas-fired power plants to meet new energy generation needs (Essential Services Task Force, 2005). This is particularly true for Arizona where the average yearly increase in natural gas consumption from 2000 to 2004 was 15 percent. In 2004, Arizonans consumed over 350 billion cubic feet of natural gas, a 28.8 percent increase over the total consumption in the state during 2003. Of the state's total gas consumption in 2004, 70 percent was from electric power generation (U.S. Department of Energy (DOE), Energy Information Administration (EIA), 2004). In-state production of natural gas accounts for less than 0.1 percent of statewide demand, thus, Arizona relies extensively on out-state sources to satisfy its natural gas demand (DOE, EIA, 2004).

Forty-three new power plants totaling more than 8,000 megawatts have come online in Arizona since 2001 (California Energy Commission, 2005). These plants are intermediate load and peaking power plants, which often ramp up quickly to meet changing electricity demand. Under normal circumstances, this practice is not troublesome if the demand can be balanced by taking gas out of storage. In the Phoenix area, however, the nearest storage is over 300 miles away and it is becoming increasingly common for pipeline pressure to drop during periods of high demand. EPNG has modified its system in response to these constraints; however, the growing demand for natural gas in the project area continues to strain the existing transmission system. In the past 12 months, EPNG has posted on its website 8 warnings of strained operating conditions, 5 notices declaring strained operating conditions, 1 critical operating condition notice, and 1 emergency critical operating condition notice on its system.

The ability of Arizona consumers to pay for natural gas is also of statewide concern. Even though prices have moderated since the peaks of the recent energy crisis in neighboring California (which

resulted in part from short- and mid-term imbalances in natural gas supply and demand), the price consumers currently pay for natural gas is significantly greater than the price consumers paid in the 1990s. Any action that can increase both supply and competition in the local energy market will reduce prices and have a significant impact on economic growth because the Phoenix area is among the fastest growing metropolitan regions in the United States. The new natural gas supplies that would result from the Phoenix Expansion Project would benefit consumers in the project area by increasing competition and putting downward pressure on prices.

Transwestern currently has executed binding precedent agreements[3] for firm natural gas transportation service for 66 percent of the total proposed capacity of its expanded system. The average contract term is 12.8 years. Table 1.1-1 lists Transwestern's shippers by contracted volumes and the contract term.

TABLE 1.1-1

Phoenix Expansion Project Precedent Agreements

Shipper	Quantity (MMcfd) Annual Daily Average	Contract Term
Arizona Public Service Company	150	15
Salt River Project Agricultural Improvement and Power District	150	15
Southwest Gas Corporation	32	15
Gila River Power, LP	25	4
UniSource Energy, Inc.	13	15
Total Contracts	332	

Comments have been received questioning the need for new interstate natural gas transmission pipelines in Arizona and whether the proposed project would benefit the citizens of Arizona. The ACC has stated that the current monopoly on interstate pipeline service in central and southern Arizona is not beneficial to the State of Arizona and is encouraging the construction of new interstate pipelines and natural gas storage facilities in Arizona. In addition, all of the shippers that have contracted for natural gas from the proposed project have stated the need for additional natural gas to serve the growing demand of their Arizona customers and that the Phoenix Expansion Project would improve the competition and reliability of natural gas service in Arizona. Because of its connection to Transwestern's existing mainline system in northern Arizona in the 1990s, UniSource Energy, Inc., (UNS) is the only entity regulated by the ACC that is not solely supplied by EPNG. UNS asserts that integrating Transwestern into the service areas historically served solely by EPNG has provided UNS customers with the benefits of enhanced service reliability and flexibility, and a competitive alternative to meeting the existing needs and future growth of its market. UNS expects the proposed Phoenix Expansion Project to extend these same benefits into areas now served solely by EPNG. Similarly, the Salt River Project Agricultural Improvement and Power District (SRP) has stated that SRP alone will need to add several thousand megawatts of electrical generation capacity over the next 10 years to provide reliable electric service to its Arizona retail customers and that the existing EPNG pipeline resources will be unable to meet those needs. Southwest Gas Corporation (SWG), a local distribution company serving customers throughout Arizona including in the greater Phoenix area, currently receives interstate pipeline service only from EPNG. In its comments on the draft EIS, SWG stated that the Phoenix Expansion Project will facilitate pipeline-on-pipeline and gas supply competition and provide capacity infrastructure and reliability benefits to its Arizona customers. Gila River Power, L.P., and Arizona Public Service Company (APS) filed similar comments in support of the proposed project.

[3] A precedent agreement is a binding contract under which one or both parties has the ability to terminate the agreement if certain conditions, such as receipt of regulatory approvals, are not met.

On September 15, 1999, the FERC issued a Policy Statement that established criteria for determining whether there is a need for a proposed project and whether the proposed project would serve the public interest. The Policy Statement explains that in deciding whether to authorize the construction of major new pipeline facilities, the FERC balances the public benefits against the potential adverse consequences. In evaluating new pipeline construction, the FERC's goal is to give appropriate consideration to the enhancement of competitive transportation alternatives, the possibility of overbuilding, subsidization by existing customers, the applicant's responsibility for unsubscribed capacity, the avoidance of unnecessary disruptions of the environment, and the unneeded exercise of eminent domain.

1.2 PURPOSE AND SCOPE OF THIS EIS

The principal purposes for preparing an EIS are to:

- identify and assess the potential impacts on the natural and human environment that would result from the implementation of the proposed project;
- describe and evaluate reasonable alternatives to the proposed project that would avoid or substantially lessen any significant adverse effects of the project on the environment;
- identify and recommend specific mitigation measures, as necessary, to avoid or minimize significant environmental effects; and
- encourage and facilitate involvement by the public and interested agencies in the environmental review process.

The topics addressed in this EIS include alternatives; geology (including paleontological resources); soils; groundwater; surface waters; wetlands; vegetation; wildlife and aquatic resources; special status species; land use, recreation and public interest areas, and visual resources; socioeconomics (including transportation and traffic and environmental justice); cultural resources; air quality and noise; reliability and safety; and cumulative impacts. The EIS describes the affected environment as it currently exists, discusses the environmental consequences of the proposed project, and compares the project's potential impact to that of various alternatives. The EIS also presents recommended mitigation measures.

The FERC is the lead agency for the preparation of this EIS. The BLM, the FS, the OPS, the BIA, and the Navajo Nation are cooperating agencies. A cooperating agency has jurisdiction by law or special expertise with respect to environmental impacts involved with the proposal and is involved in the NEPA analysis. The roles of the FERC and the cooperating agencies in the project review process are described below. The major federal, state, and local permits, approvals, and consultations for the project are discussed in section 1.6.

1.2.1 Federal Energy Regulatory Commission

The FERC is the federal agency responsible for evaluating applications filed for authorization to construct and operate interstate natural gas pipeline facilities. As such, the FERC is the lead federal agency for the preparation of this EIS in compliance with the requirements of NEPA, the Council on Environmental Quality (CEQ) regulations for implementing the procedural provisions of NEPA (Title 40 Code of Federal Regulations (CFR) Parts 1500-1508), and the FERC's regulations implementing NEPA (Title 18 CFR Part 380).

As the lead federal agency for the Phoenix Expansion Project, the FERC is required to comply with section 7 of the Endangered Species Act of 1973 (ESA), section 106 of the National Historic Preservation Act (NHPA), and section 176 of the Clean Air Act (CAA). These and other statutes have been taken into account in the preparation of this EIS. The FERC will use the document to consider the environmental impact that could result if it issues Transwestern a Certificate under section 7 of the NGA.

The FERC will also consider non-environmental issues in its review of Transwestern's application. Authorization will be granted only if the FERC finds that the evidence produced on financing, rates, market demand, gas supply, existing facilities and service, environmental impacts, long-term feasibility, and other issues demonstrates that a project is required by the public convenience and necessity. Environmental impact assessment and mitigation development are important factors in the overall public interest determination.

1.2.2 U.S Department of the Interior, Bureau of Land Management and U.S. Department of Agriculture, Forest Service

The BLM and the FS are federal land management agencies affected by Transwestern's proposal. Because these agencies must comply with the requirements of NEPA before granting or amending rights-of-way across federal lands under their jurisdiction, these agencies have elected to act as cooperating agencies in preparing this EIS.

The BLM will use the EIS to meet its NEPA responsibilities in considering Transwestern's application for a Right-of-Way Grant and obtain Temporary Use Permits for the portion of the project on federal lands.

Under section 185(f) of the Mineral Leasing Act of 1920, the BLM has the authority to issue Right-of-Way Grants and Temporary Use Permits for all affected federal lands. This would be in accordance with Title 43 CFR Parts 2800 and 2880, subsequent 2800 and 2880 Manuals, and Handbook 2801-1. For the Phoenix Expansion Project, the BLM would consider the issuance of a Right-of-Way Grant and associated Temporary Use Permits that would apply to all BLM-managed lands. The BLM would also issue the Right-of-Way Grant and Temporary Use Permits for the crossing of the Kaibab and Prescott National Forests, which are managed by the FS, and for crossing lands managed by the U.S. Department of the Interior, Bureau of Reclamation (BOR). The BLM would consider conformance with land use plans and impacts on resources and programs to determine whether to issue a Right-of-Way Grant and Temporary Use Permits.

The FS and the BOR would issue letters to the BLM that would concur or not concur with issuance of a Right-of-Way Grant and Temporary Use Permits across lands under their jurisdiction. The FS' letter to the BLM would also contain a finding statement that the project was developed in consideration of best available science. The BLM would consider the concurrence or non-concurrence of the FS and BOR, as well as FERC approval or denial, in making its decision whether to issue the Right-of-Way Grant and Temporary Use Permits. The BLM's decision would be documented in a Record of Decision (ROD). If the BLM decides to approve the project, it would issue a Right-of-Way Grant, Temporary Use Permits, and a notice to proceed that would allow construction on federal lands. The Right-of-Way Grant would include standard and site-specific stipulations of the BLM, the FS, and the BOR conditions imposed on the project as the result of the NEPA review, and a complete Plan of Development (POD). The POD is described in more detail in section 2.3. Details of land ownership are presented in sections 2.2 and 4.7.2. Consistency with land management plans is discussed in section 1.5.

1.2.3 U.S. Department of Transportation, Office of Pipeline Safety

The Pipeline and Hazardous Materials Safety Administration (PHMSA) is the federal agency responsible for regulating and ensuring the safe and secure movement of natural gas and hazardous liquids by pipelines, under 49 United States Code (USC) 60101 et seq. (the pipeline safety laws). The PHMSA's operation and maintenance responsibilities to ensure pipeline safety are found under Title 49 CFR Parts 190 to 199. The PHMSA carries out these responsibilities through its OPS. The OPS is the federal agency responsible for ensuring the safe, reliable, and environmentally sound operation of the nation's transportation system and for providing oversight for oil and natural gas pipelines. The OPS' authority is found under the Natural Gas Pipeline Safety Act of 1968 (49 USC 1671 et seq.) and the Hazardous Liquids Pipeline Safety Act of 1979 (49 USC 2001 et seq.).

1.2.4 Navajo Nation and U.S. Department of the Interior, Bureau of Indian Affairs

The proposed project would cross two classes of Navajo Nation lands in New Mexico: tribal lands and allotted lands. Tribal lands are owned in fee by the Navajo Nation, and access to these lands would be acquired through direct negotiation between Transwestern and officials of the Navajo Nation Tribal Headquarters in Window Rock, Arizona. Allotted lands are held in trust by the United States government and managed by the BIA for the benefit of individual allottees. Access to allotted lands for surveys and construction is granted by the BIA in close consultation with the Navajo Nation. Transwestern and the FERC have been in regular contact with Navajo Nation officials throughout project planning.

No Navajo Nation lands would be crossed in Arizona.

1.3 PUBLIC REVIEW AND COMMENT

On November 10, 2005, Transwestern filed a request with the FERC to implement the Commission's Pre-Filing Process for the Phoenix Expansion Project. At that time, Transwestern was in the preliminary design stage of the project and no formal application had been filed with the FERC. On November 22, 2005, the FERC granted Transwestern's request and established a pre-filing docket number (PF06-04-000) to place information related to the project into the public record. The purpose of the Pre-Filing Process is to encourage the early involvement of interested stakeholders, facilitate interagency cooperation, and identify and resolve issues before an application is filed with the FERC. The cooperating agencies agreed to conduct their environmental reviews of the project in conjunction with the Commission's Pre-Filing Process.

As part of the Pre-Filing Process, Transwestern mailed notification letters to landowners, government and agency officials, and the general public informing them about the project and inviting them to attend open houses on January 9, 10, 11, 12, and 25, 2006 to learn about the project and to ask questions and express their concerns. Notifications of the open houses were also published in local newspapers. The open houses were held in Prescott Valley, Sun City West, Black Canyon City, and Casa Grande, Arizona; and Bloomfield, New Mexico, respectively. We[4] attended the open houses to explain the NEPA environmental review process to interested stakeholders and take comments about the project. The questions and concerns raised by the public at the open houses are addressed in this EIS.

Additional contacts Transwestern has had with landowners regarding the proposed project include establishing a single point of contact within Transwestern to answer questions and provide information, establishing a website with information about the project at

[4] "We," "us," and "our" refer to the environmental staff of the Federal Energy Regulatory Commission's Office of Energy Projects, also referred to in this final EIS as the FERC staff.

http://www.crosscountryenergy.com/about/tw.shtml, and sending notification letters to affected landowners that its Certificate application was filed with the FERC.

On February 6, 2006, the Commission issued a *Notice of Intent to Prepare an Environmental Impact Statement and Proposed Land Use Plan Amendment for the Proposed Phoenix Expansion Project, Request for Comments on Environmental Issues, and Notice of Public Scoping Meetings* (NOI). The NOI was published in the FR and briefly described the project and the EIS process and announced that the BLM would be using the EIS to consider an amendment to the Phoenix Resource Management Plan. The BLM subsequently determined that a land use plan amendment would not be required for the proposed Phoenix Expansion Project (see section 1.5.1). The NOI also provided a preliminary list of issues identified by the Agency Staffs, invited written comments on the environmental issues to be addressed in the draft EIS, listed the date and location of four public scoping meetings to be held in the project area, and established a closing date for receipt of comments of March 8, 2006. The NOI was mailed to more than 5,800 individuals and organizations.

The four public scoping meetings were held to provide an opportunity for agencies and the general public to learn more about the proposed project and participate in the environmental analysis by commenting on the issues to be addressed in the EIS. The first meeting was held in Black Canyon City, Arizona on February 27, 2006; the second meeting was in Casa Grande, Arizona on February 28, 2006; the third meeting was in Prescott Valley, Arizona on March 1, 2006; and the fourth meeting was held in Avondale, Arizona on March 2, 2006. These meetings were announced in the NOI and in four local newspapers. Twenty people commented at the meeting in Black Canyon City, 2 people commented at the meeting in Casa Grande, 22 people commented at the meeting in Prescott Valley, and 3 people commented at the meeting in Avondale. Each meeting was recorded, and the transcripts were placed into the public record for the project.

On March 2, May 11, and June 28, 2006, the FERC staff conducted interagency scoping meetings in the project area to solicit comments and concerns about the project from other jurisdictional agencies. Agencies present at the meetings were the BLM (Farmington, Hassayampa, and Lower Sonoran Field Offices), the Kaibab National Forest, the Prescott National Forest, the U.S. Fish and Wildlife Service (FWS), the U.S. Army Corps of Engineers (COE), the BOR, the BIA, the Arizona Game and Fish Department (AGFD), and the Arizona State Historic Preservation Office (SHPO). Native American tribes also attended. In addition, during the Pre-Filing Process, the Agency Staffs conducted conference calls on an approximately weekly basis with Transwestern representatives to discuss project progress and issues.

The transcripts of the public scoping meetings, summaries of the interagency scoping meetings and weekly conference calls, and all written scoping comments are part of the public record for the Phoenix Expansion Project and are available for viewing on the FERC Internet website (http://www.ferc.gov).[5] The most frequently raised issues were related to general pipeline safety and route alternatives. Comments relating to protection of surface waters, cultural resources, recreational land uses, vegetation, and restoration of the right-of-way after construction is complete were also received. Table 1.3-1 lists the environmental issues that were identified during the scoping process described above and indicates the section of the EIS in which each issue is addressed. Additional issues independently identified by the Agency Staffs are also addressed in the EIS.

[5] Using the "eLibrary" link, select "General Search" from the eLibrary menu and enter the docket number excluding the last three digits in the "Docket Number" field (i.e., PF06-04 and CP06-459). Be sure to select an appropriate date range.

TABLE 1.3-1

Issues Identified and Comments Received During the Public and Agency Scoping Process for the Phoenix Expansion Project

Issue/Summary of Comment	EIS Section Addressing Comment
GENERAL/PROJECT DESCRIPTION	
Project purpose and need	1.1
Identify the project's gas customers	1.1
Regulatory authority to approve the project	1.2.1, 1.2.2, 1.2.3
Roles of the cooperating agencies	1.2.1, 1.2.2, 1.2.3
Public outreach	1.3
Describe the route selection process	1.3, 3.0
Describe the operating pressure of the pipelines	2.1.1
Project should utilize existing rights-of-way to reduce overall impacts	2.2.1, 4.7
Management of excess excavation material	2.3.1
Describe the burial depth of the pipelines	2.3.1, 4.1.3.3
Minimize impacts on collocated utilities	2.3.2, 4.1.3.5
Construction schedule	2.4
Discuss how affected landowners would be compensated	4.7.1
Discuss the use of eminent domain	4.7.2
Justify the requested construction right-of-way widths for the Phoenix Lateral	4.7.2
Justify the need for permanent right-of-way	4.7.2
Hazardous materials management and pollution prevention	4.7.6, Appendix H
Original slopes and contours should be restored	4.7.7, 4.1.1.2
Describe the steel that would be used for the pipelines	4.11.1
Describe the approval process for minor reroutes that may become necessary during construction	5.3
Provide updated route maps	Appendix B
ALTERNATIVES	
Alternatives analysis should compare impacts on environmental resources including public lands	3.0
Describe the alternatives analysis process	3.1
Evaluate the use of alternative fuels rather than creating more dependence on fossil fuels	3.2
Evaluate if other proposed pipeline projects in the area could serve as an alternative to the proposed project	3.3
Consider alternatives that would approach Phoenix from other than the north	3.4
Consider an alternative route through the Agua Fria National Monument	3.4.2.3
Avoid construction in the Agua Fria National Monument due to the high concentration of archaeological sites, important grasslands, and riparian habitat	3.4.2.3
Consider alternative routes to avoid the growth corridor in the Buckeye, Arizona area	3.4.2.5
Consider alternative routes in Pinal County, Arizona including the approved Salt River Project Agricultural Improvement and Power District (SRP) powerline corridor or collocation within the existing El Paso Natural Gas Company (EPNG) pipeline easement	3.4.2.6
Consider alternative routes to avoid construction in the Santa Cruz Wash within the City of Casa Grande, Arizona, including the SRP powerline easement or collocation within the existing EPNG right-of-way	3.4.2.6
Consider an alternative route to avoid the Haystack Estates subdivision in Chino Valley, Arizona	3.5.2.1
Consider alternative routes in the Prescott Valley, Arizona area	3.5.2.2
Consider alternative routes in the Black Canyon City, Arizona area	3.5.2.3

TABLE 1.3-1 (cont'd)

Issues Identified and Comments Received During the Public and Agency Scoping Process for the Phoenix Expansion Project

Issue/Summary of Comment	EIS Section Addressing Comment
GEOLOGY	
Describe the geologic units crossed by the project	4.1.1
Identify mining claims crossed by the project	4.1.2
Evaluate seismic risk including earthquakes and faults and describe design measures to reduce risk	4.1.3.1
Evaluate the potential for rocks or swelling clays and stream scour to damage the pipeline	4.1.3
Describe where blasting would be necessary and the blasting procedures that would be implemented	4.1.3.5, Appendix N
SOILS	
Discuss soil limitations	4.2.1.1
Assess and mitigate impacts on prime farmland	4.2.1.1, 4.2.3
Topsoil preservation	4.2.2, Appendix F
Describe the measures that would be implemented to reduce soil compaction	4.2.2, Appendix F
Potential for freeze-thaw cycles to damage the pipeline	4.2.3
WATER QUALITY/AQUATIC RESOURCES/WETLANDS	
The San Juan River crossing would require a section 401 Water Quality Certification from the State of New Mexico	1.6, 4.3.2.2
Arroyo crossings on Navajo Nation lands may require a section 401 Water Quality Certification from the Navajo Nation	1.6, 4.3.2.2
Hydrostatic testing and management of hydrostatic test water	2.3.1, 4.3.3.1
Well identification, procedures to protect wells, and mitigation if wells are damaged	4.3.1.3, 4.3.1.4
Evaluate potential impacts on groundwater resources	4.3.1.4
Identify impaired waters in the project area	4.3.2.1
Describe how impacts on waters of the United States would be avoided or reduced	4.3.2.2, 4.3.2.3, Appendix F, Appendix G, Appendix I
Concerns regarding the crossing of the Verde River and Big Chino Wash	4.3.2.2, 4.3.2.3, Appendix G
Describe any waterbody crossings that would be accomplished by use of the horizontal directional drill (HDD) method	4.3.2.3, Appendix I
The U.S Army Corps of Engineers requests that Transwestern attempt to cross the San Juan River using the HDD method	4.3.2.3, Appendix I
Describe agricultural wetlands that would be impacted	4.3.4.1
VEGETATION	
Plants must be inventoried on state lands and the state must be compensated for lost plants	1.6, 4.4.2
Residual wood including stumps and limbs should be chipped or shredded and spread no more than 4 inches deep anywhere except on roads	2.3.1, Appendix F
Consider using the Central Arizona Cactus and Succulent Society in mitigation efforts	4.4.2
Describe the restoration post-construction monitoring procedures	4.4.2
Describe project impacts on vegetation and the measures that would be implemented to reduce impacts	4.4.2, Appendix F
Impacts on riparian communities are of special concern	4.4.3
Address weed control; controls should include washing of vehicles and use of weed-free fill	4.4.4
Conduct sensitive species and noxious weed surveys in the Kaibab National Forest	4.4.4, 4.6.1, 4.6.5

TABLE 1.3-1 (cont'd)

Issues Identified and Comments Received During the Public and Agency Scoping Process for the Phoenix Expansion Project

Issue/Summary of Comment	EIS Section Addressing Comment
WILDLIFE	
Analyze impacts on wildlife, including loss of life and fragmentation of habitat	4.5.1.2, 4.12
Protect wildlife from the open trench and provide safe crossing of the construction corridor for wildlife	4.5.1.2, Appendix K
Discuss project impacts on migratory birds	4.5.1.3
SPECIAL STATUS SPECIES	
Identify all proposed and listed threatened and endangered species, including federally and state-listed species of concern, and critical habitat in the project area and identify and quantify which species or critical habit would be impacted by the project	4.6
Incorporate the Forest Service (FS) Management Indicator Species lists	4.6
Include a Biological Assessment and the outcome of consultation with the U.S. Fish and Wildlife Service under section 7 of the Endangered Species Act	4.6
Potential special status species in the project vicinity include the cactus ferruginous pygmy owl, Sonoran desert tortoise, and the southwestern willow flycatcher	4.6.3.3, 4.6.5
Evaluate project impacts on peregrine falcons	4.6.4.2
Survey for sensitive animal species along the construction corridor on FS lands; survey for northern goshawk nest and territorial behavior within 0.5 mile of the construction right-of-way using FS goshawk protocol	4.6.1, 4.6.5
Survey for desert tortoise on Bureau of Land Management (BLM) lands	4.6.5
Evaluate project impacts on pronghorn	4.6.5, 4.6.7
LAND USE/RECREATION	
Consistency with existing resource management plans	1.5.1
Consistency with existing National Forest management plans	1.5.2
Lessees of state lands crossed by the project must be contacted during the state lands permitting process	1.5.4
Ensure the project would not preclude future widening or re-alignment of Interstate 17; coordinate with the Arizona Department of Transportation to avoid impacts on Interstate 17 and to obtain appropriate permits	1.6
Coordinate use of access roads with the Arizona Department of Transportation	1.6
Protect against impairment of wilderness characteristics	4.7
Proposed 3-foot burial depth is too shallow in some agricultural areas	4.7.1
Livestock control	4.7.1
Discuss the potential impact on the Irishman Dam cattle allotment in the Kaibab National Forest	4.7.1
Discuss access to trails during construction	4.7.1
Concern regarding land use restrictions in the permanent right-of-way	4.7.2
Describe the impacts on existing residences and the measures that would be taken to avoid or reduce impacts	4.7.3.1
Evaluate potential impacts on commercial developments	4.7.3.2
Assess the potential impacts on future residential developments	4.7.3.2
Analyze impacts on public lands, including recreational activities and visual impacts	4.7.4, 4.7.5, 4.7.7
Encourage use of the right-of-way for off-highway vehicle (OHV) recreation	4.7.1., 4.7.4.1
Restrict use of the right-of-way for OHV recreation	4.7.1, 4.7.4.1
Discuss the status of the Verde River as a Wild and Scenic River	4.7.4.3
Avoid designated wilderness areas and other sensitive areas	4.7.5
Discuss project impacts on the Black Canyon Trail system and mitigation measures to reduce impacts	4.7.5
Concern regarding impact on a 40-acre nature reserve dedicated to the City of Casa Grande	4.7.5
Equipment staging areas in the Kaibab National Forest must be restored	4.7.7, Appendix F
A Fire Suppression Plan must be developed to reduce the risk of fire in National Forest lands	Appendix J

TABLE 1.3-1 (cont'd)

Issues Identified and Comments Received During the Public and Agency Scoping Process for the Phoenix Expansion Project

Issue/Summary of Comment	EIS Section Addressing Comment
SOCIOECONOMICS	
Discuss socioeconomic impacts of the project on the Navajo Nation	4.8
Describe housing for project construction workers	4.8.2
Concern that the project would result in decreased property values	4.8.5
Evaluate the potential for disproportionate adverse impacts on minority and low income populations	4.8.7
CULTURAL RESOURCES/NATIVE AMERICAN CONSULTATON	
Hold an informational meeting with Native American tribes	1.3, 4.9.3, Appendix P
Describe how cultural resources sites are identified	4.9.1
Describe the cultural resources sites identified in the project area and how adverse effects on these sites would be avoided	4.9.1, 4.9.4
Local Chapters of the Navajo Nation and affected property owners should be contacted	4.9.3
Provide copies of the cultural resources report to interested Native American tribes	4.9.3, Appendix P
Describe the process and outcome of Native American consultations	4.9.3, Appendix P
Describe the ethnographic studies conducted for the project	4.9.3.1
Address potential impacts on traditional cultural properties	4.9.3.1
AIR QUALITY AND NOISE	
Concern regarding construction-related dust	4.10.1.3, Appendix M
Discuss the applicability of the U.S. Environmental Protection Agency's general conformity regulations	4.10.1.2, 4.10.1.4, Appendix Q
Control or limit construction-related emissions including diesel particulate matter	4.10.1.3
RELIABILITY AND SAFETY	
Describe the role of the Office of Pipeline Safety in the operation of the project	1.2.3, 4.11.1
Describe how the pipeline would be monitored and maintained	2.6, 4.11.1
General concern regarding the safety of operating a high pressure natural gas pipeline near residences	4.11
Describe emergency response procedures	4.11.1
Evaluate the potential for third-party excavations to damage the pipeline	4.11.1
Concerns regarding possible terrorist attacks on the proposed facilities	4.11.4
Describe coordination efforts with local fire authorities	4.11.3
CUMULATIVE IMPACTS	
Cumulative impact analysis should consider direct and indirect effects on all resources	4.12
Consider other major projects, including overhead powerlines, in the cumulative impact analysis	4.12

We attended or conducted other informational meetings in the project area. These meetings included an appearance before the Resources Committee of the Navajo Nation Council on February 23, 2006; a meeting with the Arizona State Land Department (ASLD) on March 1, 2006; a meeting with the Town of Prescott Valley, Arizona on May 10, 2006; meetings with the City of Casa Grande, Arizona on January 12 and June 28, 2006; and a meeting with Native American tribes on June 28, 2006. The tribes that participated in the June 28, 2006 meeting are listed in section 4.9.3. The FERC staff also attended technical conferences in the City of Casa Grande and the Town of Buckeye, Arizona on December 13 and 14, 2006, respectively, to discuss potential project-related impacts on approved and proposed developments in those areas. The technical conferences were attended by local government officials, developers, home builders, and other interested parties. In addition to participating in numerous meetings in the project area, we conducted aerial inspections of the proposed route on January 10 and May 10, 2006, and a ground reconnaissance of the proposed route in the Buckeye, Arizona area on December 14, 2006.

The draft EIS was filed with the U.S. Environmental Protection Agency (EPA) and mailed to federal, state, and local government agencies; elected officials; Native American tribes; local libraries and newspapers; intervenors[6] in the FERC's proceeding; and other interested parties (i.e., affected landowners, miscellaneous individuals, and environmental groups who provided scoping comments or asked to remain on the mailing list). In addition, affected landowners who were added to the mailing list after the NOI was issued and landowners potentially affected by some of the alternatives under consideration (see section 3.0) were sent the draft EIS. A formal notice (Notice of Availability) indicating that the draft EIS was available for review and comment was published in the FR. The public was given 45 days after the date of publication in the FR to review and comment on the draft EIS both in the form of written comments and at five public meetings held in the project area.

The public meetings held to receive comments on the draft EIS were in Prescott Valley, Black Canyon City, Buckeye, and Casa Grande, Arizona and Crownpoint, New Mexico on June 4, 5, 6, 7, and 12, 2007, respectively. The meetings were announced in the draft EIS, in the notice indicating that the draft EIS was available, on the FERC Internet website, and in several local newspapers. Each meeting was recorded. The 45-day comment period for receiving written comments on the draft EIS closed on June 18, 2007. Written comments were received from federal, state, and local agencies; a Native American tribe; companies/organizations; individuals; and Transwestern. The transcripts from the public meetings and the written comment letters are available for viewing on the FERC's Internet website (http://www.ferc.gov)[7] and are included in Volume II of this final EIS with the Agency Staffs' response to each comment. All comments related to environmental issues received on the draft EIS within a time frame that allowed for their review are addressed in this final EIS, including those submitted outside of the comment period.

This final EIS has been filed with the EPA for its formal Notice of Availability and was mailed to federal, state, and local government agencies; elected officials; Native American tribes; local libraries and newspapers; intervenors to the FERC's proceeding; and other interested parties (i.e., landowners, miscellaneous individuals, and environmental groups who provided scoping comments, commented on the draft EIS, asked to remain on the mailing list, or wrote to the FERC or one of the cooperating agencies asking to receive a copy of the document). The distribution list for the final EIS is in Appendix A.

[6] Intervenors are official parties to the proceeding and have the right to receive copies of case-related Commission documents and filings by other intervenors. Likewise, each intervenor must provide 14 copies of its filings to the Secretary of the Commission and must send a copy of its filings to all other intervenors. Only intervenors have the right to seek rehearing of the Commission's decision.

[7] Using the "eLibrary" link, select "General Search" from the eLibrary menu and enter the docket number excluding the last three digits in the "Docket Number" field (i.e., CP06-459). Be sure to select an appropriate date range.

In accordance with CEQ regulations implementing NEPA, no agency decision on the proposed action may be made until 30 days after the EPA publishes a Notice of Availability of the final EIS in the FR. However, the CEQ regulations provide an exception to this rule when an agency decision is subject to a formal internal appeal process that allows other agencies or the public to make their views known. This is the case at the FERC, where any Commission decision on the proposed action would be subject to a 30-day rehearing period. Therefore, the FERC decision may be made at the same time that notice of the final EIS is published by the EPA, allowing the appeal periods to run concurrently.

For the BLM, the date the EPA's Notice of Availability appears in the FR initiates a 30-day period before the decision whether to issue the Right-of-Way Grant and Temporary Use Permits is made. Comments received on the final EIS during the 30-day period will be reviewed to determine whether they have merit (e.g., identify significant issues not previously addressed or introduce significant new information). If no changes are warranted, a ROD is prepared that documents the selected alternative as well as mitigation measures. No action concerning a proposal may be taken on federal land until the ROD for the EIS has been signed and the Right-of-Way Grant and Temporary Use Permits have been issued.

1.4 NONJURISDICTIONAL FACILITIES

1.4.1 Background

Under section 7 of the NGA, the FERC is required to consider, as part of its decision to certificate interstate natural gas facilities, all factors bearing on the public convenience and necessity. The facilities for the Phoenix Expansion Project that would be under the FERC's jurisdiction include modifications at two existing compressor stations, approximately 285.3 miles of pipeline laterals and loops, a filter-separator/odorant facility, 4 taps, 11 meter stations, 6 pig[8] launchers, 3 pig receivers, 27 valves, and 4 remote blowdown valves. The proposed facilities are described in detail in section 2.1.

Occasionally, proposed projects have associated facilities that do not come under the jurisdiction of the FERC. These "nonjurisdictional" facilities may be integral to the need for the proposed project (e.g., a new or expanded power plant at the end of a pipeline that is not under the jurisdiction of the FERC) or they may be merely associated as a minor, non-integral component of the jurisdictional facilities that would be constructed and operated as a result of the proposed facilities.

The nonjurisdictional facilities associated with the proposed project are those facilities that Transwestern anticipates would be constructed by the customer downstream of the interconnection between the Phoenix Lateral and the existing pipeline facilities of the customer. Three anchor shippers, APS, SRP, and Gila River Power, LP are electric generators in the Phoenix area. These shippers would construct minor piping from the outlet flange of the project's jurisdictional meter station to connect to the existing station fuel gas line of the generating facilities. The other two anchor shippers, SWG and UNS, are local distribution companies in the Prescott Valley and Phoenix areas, respectively, that would construct certain facilities downstream of the proposed jurisdictional taps and/or meter stations that could include metering facilities, interconnect piping, filter-separators, pressure regulators, odorization facilities, and other ancillary equipment as required at the identified meter station sites in order to deliver natural gas into existing or planned distribution networks.

The FERC has adopted a four-factor procedure to determine the appropriate scope of its environmental review when project-related nonjurisdictional facilities are involved. These factors are:

[8] A pig is an internal tool that can be used to clean and dry a pipeline and/or to inspect it for damage or corrosion.

- whether the regulated activity comprises "merely a link" in a corridor-type project (e.g., a transportation or utility transmission project);

- whether there are aspects of the nonjurisdictional facility in the immediate vicinity of the regulated activity that affect the location and configuration of the regulated activity;

- the extent to which the entire project will be within the FERC's jurisdiction; and

- the extent of cumulative federal control and responsibility.

1.4.2 Conclusions

After applying the four-factor procedure to the Phoenix Expansion Project, the Agency Staffs have concluded:

- The Phoenix Expansion Project is more than a mere link in a corridor-type project because the recipients of the natural gas to be transported through the Phoenix Expansion Project are primarily end-users who will use the gas for electric generation.

- The nonjurisdictional facilities would directly connect the jurisdictional facilities to existing customer facilities. Therefore, there are no aspects of the nonjurisdictional facilities that affect the location and configuration of the regulated activity.

- The nonjurisdictional facilities are relatively minor and, unlike a major nonjurisdictional facility, such as a power plant, likely would not require extensive environmental review, particularly where these nonjurisdictional facilities would be constructed within existing customer facilities that have already been approved.

- The nonjurisdictional facilities to be constructed as a part of this project are outside the Commission's control and jurisdiction.

In summary, the Agency Staffs have concluded that even though the Phoenix Expansion Project is more than a mere link in a corridor-type project, they have no jurisdiction over the associated downstream facilities to require their environmental analysis in connection with the analysis of the proposed project.

1.5 CONSISTENCY WITH REGIONAL AND LOCAL PLANS

The proposed project must be consistent or in conformance with the guidelines, management objectives, and/or designated uses set forth in regional and local plans for the project area, or a plan amendment would be required. Plans that were reviewed for consistency include BLM Resource Management Plans (RMPs), FS forest management plans, and local land management plans. A summary of the applicable plans and consistency information is presented below. The FERC's consultation efforts with the agencies discussed below are described in section 1.3.

1.5.1 U.S. Department of the Interior, Bureau of Land Management

The proposed project would cross BLM-managed lands under the jurisdiction of the BLM Farmington District (Farmington Field Office) in New Mexico and the BLM Phoenix District (Hassayampa and Lower Sonoran Field Offices) in Arizona.

A review of the applicable RMPs indicates that the proposed project would conform to these plans in their current forms and when recently revised versions of these plans are adopted by the BLM. Therefore, the proposed project would conform to BLM plans and programs, subject to site-specific conditions that may be implemented as a result of this analysis. The RMPs analyzed are summarized below.

Farmington Planning Area

Within the BLM's Farmington District, the San Juan Lateral Loop A would cross 5.7 miles of BLM lands under the jurisdiction of the Farmington Field Office within the Farmington Planning Area. The Farmington Planning Area is managed under the Farmington RMP (BLM, 2003). Installation of Loop A, along with Loop B, which would not cross BLM lands, would complete looping of the San Juan Lateral that was constructed by Transwestern in 2005. Loop A would be installed adjacent to the San Juan Lateral and would be consistent with the current RMP.

Bradshaw-Harquahala Planning Area

Within the BLM's Phoenix District, the Phoenix Lateral would cross the Bradshaw-Harquahala Planning Area under the jurisdiction of the Hassayampa Field Office between milepost (MP) 0.0 in Yavapai County and approximate MP 153.8, where the Phoenix Lateral would cross Interstate 10 in Maricopa County. The Bradshaw-Harquahala Planning Area is currently managed under three separate plans: the Phoenix RMP; the Lower Gila North Management Framework Plan; and the Kingman Resource Area RMP. The proposed project would only cross lands currently managed under the Phoenix RMP (BLM, 1988).

The Phoenix RMP, adopted in 1988, established an approximately 1-mile-wide multi-use transportation and utility corridor on BLM lands along Interstate 17, extending from Cordes Junction on the north to Black Canyon City on the south. The existing EPNG pipeline, which the Phoenix Lateral would follow for the majority of its length between MPs 0.0 and 107.8, is located within the designated transportation and utility corridor. However, for the reasons discussed below, the Phoenix Lateral would deviate from the EPNG right-of-way for a distance of about 17.9 miles between MPs 68.4 and 86.3 in the area between Cordes Junction and Black Canyon City. Although this segment of the Phoenix Lateral would not be located in the current multi-use transportation and utility corridor outlined in the Phoenix RMP, it would be in conformance with the multi-use decisions made in the Phoenix RMP for the reasons discussed below.

The general management guidance for the Phoenix RMP under Land Use Authorization states: "Land use authorizations (rights-of-way, leases, permits, easements) would continue to be issued on a case-by-case basis and in accordance with recommendations in this proposed RMP/FEIS. Rights-of-way would be issued to promote the maximum utilization of existing right-of-way routes including joint use whenever possible." The RMP under Utility Corridors then states: "All major utilities would be routed through designated corridors. This would prevent the proliferation of major routes across public lands and would reduce the impacts to sensitive resources."

It should be noted, however, that in the program-specific decisions of the Phoenix RMP under Issue 2 – Utility Corridors and Communication Sites it states: "The recommended utility corridors identify the BLM's preferred utility system routing. However, with the exception of those areas identified in this RMP as closed to right-of-way development, the RMP area is generally open to right-of-way development on a case-by-case basis."

Since the signing of the ROD for the Phoenix RMP in 1989, the office administrating this planning area has generally tried to keep all major utilities within the designated corridors as preferred, although the plan allowed for development in other areas on a case-by-case basis. This practice has helped meet management objectives in preventing the proliferation of major access routes.

Transwestern proposes to deviate from the existing EPNG right-of-way to avoid construction in the Agua Fria National Monument (AFNM), which was created by Presidential Proclamation 7263 in January 2000. The AFNM comprises approximately 70,900 acres of BLM land and 1,444 acres of scattered private parcels located entirely east of Interstate 17. The EPNG pipeline was constructed about 45 years before the creation of the AFNM and crosses the AFNM for approximately 10 miles in a location northeast of Black Canyon City. As discussed in section 3.4.2.3, we concluded that construction of the Phoenix Lateral through the AFNM would result in new land disturbance outside of the existing EPNG right-of-way and, thus, would not be consistent with the Presidential Proclamation.

In response to the creation of the AFNM and to address future management for the planning area, the BLM issued the Agua Fria National Monument and Bradshaw-Harquahala Draft RMP and Draft EIS in January 2006. When finalized, the Bradshaw-Harquahala RMP will replace and consolidate the Phoenix RMP, the Lower Gila North Management Framework Plan, and the Kingman Resource Area RMP into a comprehensive RMP for the Bradshaw-Harquahala Planning Area and AFNM (BLM, 2006a). In the Bradshaw-Harquahala Draft RMP, the BLM evaluated several new and modified transportation and utility corridor alternatives to accommodate future utilities in proximity to the AFNM area. Based on its analysis, the BLM identified Alternative "E" as the preferred future transportation and utility corridor. In response to public comments, Alternative "E" was modified to accommodate the proposed alignment of the Phoenix Lateral. Therefore, the Phoenix Lateral would be consistent with the final Bradshaw-Harquahala RMP because Alternative "E" would encompass the proposed alignment between Cordes Junction and Black Canyon City.

Considering that the current Phoenix RMP allows decisions to be made on a case-by-case basis, noting that the proposed RMP contains a utility corridor that would include Transwestern's entire proposed pipeline route, and no significant resources would be impacted by the proposed route, the BLM has determined that the proposed Phoenix Expansion Project is in conformance with the existing RMP and would not conflict with anticipated decisions in the proposed RMP.

Phoenix South Planning Area

Within the BLM's Phoenix District, the Phoenix Lateral would cross the Phoenix South Planning Area under the jurisdiction of the Lower Sonoran Field Office between approximate MPs 153.8 in Maricopa County and 255.1 in Pinal County. The Phoenix South Planning Area is currently managed in accordance with six RMPs and RMP amendments, including the Lower Gila North Management Framework Plan (BLM, 1983); the Lower Gila South RMP (BLM, 1988); the Phoenix RMP (BLM, 1988); the Lower Gila South RMP Goldwater Amendment (1990); the Arizona Standards for Rangeland Health and Guidelines for Grazing Administration (1997); and the Arizona Statewide Land Use Plan Amendment Fire, Fuels, and Air Quality Management (2005) (BLM, 2006b). The Phoenix South Planning Area includes the Sonoran Desert National Monument, which was established by Presidential Proclamation No. 7397 on January 17, 2001.

The BLM is currently developing a draft EIS and draft Sonoran Desert National Monument Management Plan and Phoenix South RMP (PSRMP). Through this planning area, the Phoenix Lateral would be within a designated utility corridor, which is north of three existing pipelines that are routed along the northern border of the Sonoran Desert National Monument. The PSRMP does not include any proposed changes to the existing utility corridor (BLM, 2006c). As such, the Phoenix Lateral would be

consistent with the existing land management plans and is expected to be consistent with the final PSRMP.

1.5.2 U.S. Department of Agriculture, Forest Service

Approximately 29.9 miles of the proposed Phoenix Lateral would cross lands managed by the FS: 9.0 miles in the Kaibab National Forest and 20.4 miles in the Prescott National Forest. As discussed in section 1.2.2, the FS is a cooperating agency in the preparation of this EIS, but the BLM is ultimately responsible for issuing the Right-of-Way Grant and Temporary Use Permits for crossing Forest System lands. The BLM would consider the concurrence or non-concurrence of the FS in making its decision.

Kaibab National Forest

A decision that allows the Phoenix Lateral to cross the Kaibab National Forest must be compatible with the Kaibab Forest Plan, including the *Kaibab National Forest Recreation Opportunity Spectrum and Scenery Management System Guidebook* (ROS-SMS Guidebook). Direction in the Kaibab Forest Plan for Ecosystem Management Area 1 contains guidelines to "Minimize the number of electronic sites and utility corridors" and "allow expansion of existing major utility corridors."

The Recreation Opportunity Spectrum (ROS) is a classification system that describes different outdoor recreation settings across the forest using seven standard classes: Primitive, Semi-Primitive Non-motorized, Semi-Primitive Motorized, Roaded Natural, Roaded Modified, Rural, and Urban. These classes are described in section 4.7.4.1.

The majority of the pipeline route through the Kaibab National Forest would be located in an area designated as Roaded Modified, with the exception of a Roaded Natural area at Little Hell Canyon Reservoir, near the boundary with the Prescott National Forest.

The ROS-SMS Guidebook shows that special uses management is consistent with the Roaded Modified ROS classification and restricted in Roaded Natural areas. The guidelines for special uses management in the Roaded Modified ROS class state, "When possible utilize existing transmission [rights-of-way] for additional pipeline/powerline development." The guidelines for special uses management in the Roaded Natural ROS class state, "Attempt to avoid clearing of new major utility corridors within sensitive travel corridor foregrounds," and also suggest that new utilities be constructed underground.

The entire length of the Phoenix Lateral that would be located in the Kaibab National Forest would be parallel to the existing EPNG pipeline right-of-way, reducing the amount of clearing for a new utility corridor. The pipeline would also be installed underground. Therefore, the Phoenix Expansion Project would be consistent with the recreational land use management plans detailed in the Kaibab Forest Plan and the ROS-SMS Guidebook. Maintenance of the permanent pipeline right-of-way would not impact the overall use or character of surrounding lands.

Visual resources in the Kaibab National Forest are managed using the Scenery Management System (SMS) detailed in the ROS-SMS Guidebook, which is consistent with the FS' current guidance on scenery management *Landscape Aesthetics A Handbook for Scenery Management* (SMS Handbook). The SMS is used to inventory, analyze, and manage the aesthetic values of National Forest lands. It is used to create and maintain landscapes having high scenic diversity, harmony, and unity for the benefit of society in general. Scenic Integrity Objectives (SIO) of Very High (Level 1), High (Level 2), Moderate (Level 3), Low (Level 4), and Very Low (Level 5) are used to evaluate deviations from or alterations to the landscape character that is valued for its aesthetic appeal. These SIO levels are described in section 4.7.7.

The majority of the Phoenix Lateral that would be located in the Kaibab National Forest would be located in SIO Level 4, with the exception of an area at Little Hell Canyon Reservoir (MP 9.5), which would be located in SIO Level 2. The SMS-ROS Guidebook shows that special uses management is consistent with SIO Level 4. The guidelines on special uses management for this class suggest, "Where possible, use this SIO for expansion of existing transmission line or transmission line right-of-way expansion or construction of new transmission lines."

The guidelines on special uses management for SIO Level 2 suggest, "Attempt to avoid expansion or development of new major utility rights-of-way in this SIO. Utility and transmission lines should be located outside of this SIO where possible, or should be buried underground." Based on Transwestern's consultations with the Kaibab National Forest, it is acknowledged that there is no reasonable way to locate the pipeline outside of the SIO Level 2 area (Little Hell Canyon Reservoir). The proposed project would not involve the development of a new utility right-of-way through this SIO Level, would be located adjacent to the existing EPNG pipeline right-of-way, and would be buried underground. Furthermore, as discussed in section 4.7.7, Transwestern consulted with the FS and developed mitigation measures, including a detailed restoration plan for Little Hell Canyon Reservoir. These measures would minimize adverse visual effects of pipeline construction and operation in the Kaibab National Forest. Therefore, the project would be consistent with the scenic management plans detailed in the Kaibab Forest Plan and the ROS-SMS Guidebook.

Prescott National Forest

The FS manages the Prescott National Forest under the Prescott National Forest Land and Resource Management Plan (Prescott Forest Plan), and the proposed project must be consistent with this plan.

The Prescott Forest Plan adopts the ROS as a framework for recreation planning. The Prescott Forest Plan uses the same ROS classes as described in the ROS-SMS Guidebook but without the class of Roaded Modified. The Prescott Forest Plan indicates that approximately 50 percent of the Prescott National Forest is considered Roaded Natural. The Prescott Forest Plan does not provide maps showing the inventoried ROS; instead, the Prescott Forest Plan manages land use planning with forest-wide guidelines and additional guidelines for specific management areas. The proposed pipeline would fall entirely within the Roaded Natural ROS class. As discussed above, the guidelines in the SMS-ROS Guidebook for special uses management in the Roaded Natural ROS class suggest, "Attempt to avoid clearing of new major utility corridors within sensitive travel corridor foregrounds," and also suggest that new utilities be constructed underground.

The Phoenix Lateral would be parallel to the EPNG pipeline for its entire length across the Prescott National Forest, and would be installed underground. Therefore, the Phoenix Lateral would be compatible with the ROS for the area.

The Prescott Forest Plan uses an older visual management system of Visual Quality Objectives (VQOs), which has since been replaced by the SIO described in the SMS Handbook (by revised Forest Service Manual Chapter 2380, effective as of May 2, 2003). The SMS Handbook provides a conversion system for VQO classes and SMS classes, as described in section 4.7.7.

The majority of the Phoenix Lateral would be located in areas of SIO Level 4 (Modification) or SIO Level 3 (Partial Retention) with small portions of the proposed route entering areas of SIO Level 2 (Retention) at Hell Canyon (MP 17.8) and the Verde River (MP 23.8). For its entire length through the Prescott National Forest, the pipeline would be adjacent to an existing pipeline right-of-way. Additionally, the Phoenix Lateral would be installed to meet SIO guidelines in the Kaibab National

Forest, and installation in the Prescott National Forest would utilize the same methods. Furthermore, as discussed in section 4.7.7, Transwestern consulted with the FS and developed mitigation measures that would minimize adverse visual effects of pipeline construction and operation in the Prescott National Forest. Therefore, the project would be consistent with the scenic management plans detailed in the Prescott Forest Plan.

The Phoenix Lateral would cross the Verde River at MP 23.8 within the Prescott National Forest. Reaches of the Verde River were designated as scenic in the Arizona Wilderness Act of 1984 under the Wild and Scenic River Act (Public Law 90-542). The proposed crossing location is not within an area designated as Wild or Scenic in the FS' Verde Wild and Scenic River Comprehensive Management Plan.

The Arizona Wilderness Coalition, an association of groups and individuals concerned with preserving and restoring wilderness in Arizona, has prepared a Wild and Scenic River Proposal for the portion of the Verde River within the project area. The proposal briefly describes the key issues regarding the suitability of segments of the Verde River for designation as Wild or Scenic and includes a recommendation to designate the reach crossed by the Phoenix Lateral and the existing EPNG pipeline as Wild. The proposal is not a comprehensive suitability study, and the key issues raised in the proposal are under review by the FS to determine eligibility of this segment for Wild or Scenic designation within the Prescott National Forest. Additional discussion of the Verde River is presented in section 4.3.2.3.

1.5.3 Navajo Nation

Most of the Navajo Nation lands are administered by the BIA and include Navajo Indian Reservation lands (tribal lands) and allotted lands. The Navajo Nation lands crossed by the project are primarily used for grazing. These lands are crossed by segments of Loop A and Loop B. The Phoenix Lateral does not cross any Navajo Nation lands.

Transwestern has met with the Navajo Nation and will continue to work with Navajo Nation representatives for survey permission and on the terms and conditions for the right to construct and operate the pipeline.

1.5.4 Other Agencies

U.S. Department of the Interior, Bureau of Reclamation

The BOR is a federal water management agency with a Strategic Plan outlining numerous programs, initiatives, and activities designed to help the western states, Native American tribes, and others meet water needs and balance the use of water in the west. The proposed project would cross a portion of BOR land that is managed by the Lower Colorado Regional Office of the BOR. The Lower Colorado Regional Office of the BOR manages the Colorado River to meet water and power delivery obligations, protect endangered species and native habitat, enhance outdoor recreation opportunities, and provide flood control. This regional office also annually measures and accounts for the water's use, and maintains the river channel and protective levees.

The Phoenix Lateral would cross approximately 0.8 mile of BOR land, 100 percent of which follows existing rights-of-way. Transwestern filed an application for a Transportation Utility Systems right-of-way with the BOR in mid-2006. As discussed in section 1.2.2, the BLM is ultimately responsible for issuing the Right-of-Way Grant and Temporary Use Permits for crossing BOR lands. The BLM would consider the concurrence or non-concurrence of the BOR in making its decision.

Arizona State Land Department

The ASLD manages land held in trust by the state to provide revenue to its beneficiaries, including schools, hospitals, and governmental buildings. The ASLD maintains authority over all trust lands and the natural products from these lands. The Phoenix Lateral would cross approximately 56.6 miles of ASLD lands.

Since the ASLD's inception, its missions have been to manage the Land Trust and to maximize its revenues for the beneficiaries. All uses of the land must benefit the Trust, a fact that distinguishes the ASLD from other public land management agencies. While public use of trust land is not prohibited, it is regulated to ensure protection of the land and reimbursement to the beneficiaries for its use.

Transwestern has applied for a Right-of-Way Grant from the ASLD for authorization to construct and operate the proposed project on ASLD lands. Transwestern anticipates that the ASLD Right-of-Way Grant process would be completed subsequent to the completion of this EIS. Issuance of the ASLD Right-of-Way Grant would indicate that the project conforms to the requirements of the ASLD.

1.5.5 Local Land Management Plans

Many counties in Arizona and New Mexico have adopted a general or comprehensive plan to set forth policies guiding local land use and development. Some general plans contain maps that identify the locations of allowable land uses. These designated land use maps not only identify existing land uses, but also future potential uses of lands. Many municipalities also employ zoning codes for the purpose of implementing the county management plans by way of geographic designations and categorical restrictions. The proposed project's consistency with local land management plans and local zoning codes was evaluated by consulting these land use plans, codes, and land use maps.

San Juan County, New Mexico

San Juan County does not have a general or comprehensive plan and does not have a county zoning code. Proposed Loop A is consistent with the San Juan County Subdivision Regulations.

McKinley County, New Mexico

The proposed project is consistent with the McKinley County Comprehensive Plan. McKinley County does not have a zoning code. However, the McKinley County Subdivision Regulations state that "easements within the boundaries of a (subdivision) lot shall not be used for major transmission lines, pipelines, streets or alleys." Because no subdivisions would be located near Loop B in McKinley County, the proposed project is consistent with the subdivision regulations.

Coconino County, Arizona

The proposed project is consistent with the Coconino County Comprehensive Plan as adopted on September 23, 2003. The Coconino County Zoning Ordinance states that transmission and distribution lines and supporting structures shall receive an exemption from zoning regulations pertaining to public utility installation.

Yavapai County, Arizona

The Phoenix Expansion Project is consistent with the Yavapai County General Plan of April 7, 2003. The county Planning and Zoning Ordinance exempts underground structures with no significant

aboveground structures, and public utility lines, structures, and installations from zoning clearance requirements. The ordinance does not directly address transmission lines or pipelines.

Maricopa County, Arizona

The proposed project is consistent with the Maricopa County Comprehensive Plan as revised August 7, 2002, and with the Maricopa County Zoning Ordinance. Transwestern would consult with local zoning officials regarding the potential need for permits or zoning variances for structures associated with the proposed project, such as fences around aboveground facilities.

Pinal County, Arizona

The proposed project is consistent with the Pinal County Comprehensive Plan as amended on December 30, 2005. The Pinal County Trails Program Plan includes the goal of partnering with public and private entities to expand the county's trail system using washes, utility corridors, railways, roadways, and other existing pathways, which could have an effect on future uses of the project right-of-way. The Pinal County Zoning Ordinance may require that the crossing of natural open space areas by utility easements receive the approval of the Planning and Development Director. Transwestern would secure all necessary zoning approvals before construction of the proposed project.

1.6 PERMITS, APPROVALS, CONSULTATIONS, AND REGULATORY REQUIREMENTS

Table 1.6-1 lists the major federal, state, and local permits, approvals, and consultations identified for the construction and operation of the Phoenix Expansion Project. Transwestern would be responsible for obtaining all permits and approvals required to implement the proposed project regardless of whether they appear in this table.

TABLE 1.6-1

Major Permits, Approvals, and Consultations for the Phoenix Expansion Project

Regulatory Agency	Required Permit or Approval	Agency Action
FEDERAL		
Advisory Council on Historic Preservation	Section 106 Consultation, National Historic Preservation Act (NHPA)	Has the opportunity to comment if the project may affect cultural resources that are either listed on or eligible for listing on the National Register of Historic Places.
Federal Energy Regulatory Commission (FERC)	Certificate of Public Convenience and Necessity	Determine whether the construction and operation of a natural gas pipeline project is in the public interest.
	General Conformity Determination	Determine whether the project is in conformance with the federal General Conformity requirements.
U.S. Department of Agriculture Forest Service		
Kaibab National Forest	Right-of-Way Grant and Temporary Use Permit	Consider issuance of a letter concurring with the Bureau of Land Management's (BLM) issuance of a Right-of-Way Grant and Temporary Use Permit to cross Forest System lands under the authority of the Mineral Leasing Act.
Prescott National Forest	Right-of-Way Grant and Temporary Use Permit	Consider issuance of a letter concurring with the BLM's issuance of a Right-of-Way Grant and Temporary Use Permit to cross Forest System lands under the authority of the Mineral Leasing Act.
U.S. Department of the Army Corps of Engineers (COE)	Section 404, Clean Water Act (CWA) Permit	Consider issuance of a section 404 permit for the placement of dredge or fill material into all waters of the United States, including jurisdictional wetlands.
U.S. Department of the Interior		
BLM	Right-of-Way Grant Under Authority of the Mineral Leasing Act	Consider issuance of a Right-of-Way Grant for portions of the project that would encroach on federal lands, including easements across federally owned waterways.
	Temporary Use Permits Under Authority of the Mineral Leasing Act	Consider issuance of Temporary Use Permits for temporary construction activities in a construction right-of-way on federal lands in conjunction with the right-of-way granted on federal lands.
Bureau of Indian Affairs	Right-of-Way Grant; Special Use Permit; Archaeological Permit	Consider project's effect on tribal lands.
Bureau of Reclamation (BOR)	Right-of-Way Grant and Temporary Use Permit	Consider issuance of a letter concurring with the BLM's issuance of a Right-of-Way Grant and Temporary Use Permit to cross BOR lands under the authority of the Mineral Leasing Act.
	Encroachment Permit	Consider issuance of permit for pipeline crossing of federal lands.
U.S. Department of Justice Bureau of Alcohol, Tobacco, Firearms, and Explosives	Explosive User's Permit	Consider issuance of permit to purchase, store, and use explosives for site preparation during pipeline construction.
U.S. Department of Transportation Federal Highway Administration	Encroachment Permit	Consider issuance of permit for pipeline crossing of federally funded highways.
U.S. Environmental Protection Agency (EPA), Regions VI and IX	Section 401, CWA, Water Quality Certification on Navajo Nation Lands	In conjunction with the Navajo Nation, consider issuance of water use and crossing permits.
	Section 402, CWA, National Pollutant Discharge Elimination System (NPDES)	In conjunction with states, review and issue NPDES permit for discharge of hydrostatic test water.

TABLE 1.6-1 (cont'd)

Major Permits, Approvals, and Consultations for the Phoenix Expansion Project

Regulatory Agency	Required Permit or Approval	Agency Action
U.S. Fish and Wildlife Service	Section 7 Consultation, Biological Opinion (Endangered Species Act (ESA))	Consider lead agency finding of impact on federally listed or proposed species. Provide Biological Opinion if the project is likely to adversely affect federally listed or proposed species or their habitats.
	Fish and Wildlife Coordination Act	Provide comments to prevent loss of and damage to wildlife resources.
	Migratory Bird Treaty Act	Provide comments to prevent loss of and damage to wildlife resources.
ARIZONA		
Corporation Commission	Utility Regulation and Safety	Consultation and review.
Department of Agriculture	Permit to Transport Protected Plants for Commercial Resale	Consult regarding the need to regulate movement of protected plants.
Department of Environmental Quality	Section 401, CWA, Water Quality Certification	Consider approval of certification of activities related to dredge and fill materials.
	Section 404 Coordination, CWA	Consider issuance of a section 404 permit for the placement of dredge or fill material into all waters of the United States, including jurisdictional wetlands.
	Reuse of Wastewater for Hydrotesting	Consider issuance of permit for reuse of municipal wastewater for hydrostatic testing.
	Permit to Discharge Hydrotest Water	Consider issuance of permit to discharge hydrostatic test water to surface waters or upland locations.
Department of Transportation	Road Crossing Permits for all Interstate and State Highway Crossings	Consider authorization for state and federal road crossings.
Department of Water Resources	Groundwater Withdrawal Permit	Consider issuance of a permit for withdrawal of groundwater
Game and Fish Department	Threatened and Endangered Species Clearance	Consider issuance of biological clearance for state-listed species.
Governor's Office	Consultation of Infrastructure Development	Consult with the governor's officer regarding proposed and future development.
State Historic Preservation Office	Section 106 Consultation, NHPA	Consult with the FERC, project applicant, appropriate land management agencies, and others regarding activities potentially affecting cultural resources.
State Land Department Natural Resources Division	Right-of-Way Easement	Consider authorization of an easement for the pipeline crossing of state lands.
	Compensation	Establishes price list for plants removed from or destroyed on state lands.
NEW MEXICO		
Energy, Minerals, and Natural Resources Department Oil Conservation Division	NPDES Hydrostatic Test Water Discharge Permit	Consider issuance of permit for discharge of hydrostatic test water.
Environment Department	Section 401, CWA, Water Quality Certification	Consider approval of certification of activities related to dredge and fill materials.
	Consumptive Water Use Permit	Consider issuance of a permit for consumptive water use.
Department of Game and Fish	State and Federal Threatened and Endangered Species Consultations	Consider issuance of an incidental take permit for state-listed species.

TABLE 1.6-1 (cont'd)

Major Permits, Approvals, and Consultations for the Phoenix Expansion Project

Regulatory Agency	Required Permit or Approval	Agency Action
State Historic Preservation Division	Section 106 Consultation, NHPA	Consult with the FERC, project applicant, appropriate land management agencies, and others regarding activities potentially affecting cultural resources.
State Land Office	Consultation and Comment	Consider effect of project on New Mexico lands.
NAVAJO NATION		
Department of Fish and Wildlife	Tribal and Federal Threatened and Endangered Species Consultations	Ensure compliance with section 7 of the ESA and Navajo Nation Endangered Species List.
Environmental Protection Agency	NPDES Hydrostatic Test Water Discharge Plan Review; Solid Waste Management Plan Review	Plan review and consultation with the EPA; review to ensure compliance with Resource Conservation Recovery Act.
Historic Preservation Department/Tribal Historic Preservation Office	Section 106 Consultation, NHPA	Comment on project and its effect on historic properties, including Programmatic Agreement.
Water Quality Program	Sections 401 and 404, CWA, Water Quality Certification and Stormwater Pollution Prevention Plan (SWPPP) Review	Review SWPPP before submittal of Notice of Intent to use General Construction Permit.
YAVAPAI COUNTY, ARIZONA		
Department of Transportation	Crossing Permits	Consider issuance of road crossing permits for all state and county highway crossings.
MARICOPA COUNTY, ARIZONA		
Air Quality Department	Air Permits	Consider issuance of dust control/air quality permits to contractors.
Department of Transportation	Crossing Permits	Consider issuance of road crossing permits for all state and county highway crossings.
Flood Control District	Crossing Permits	Consider issuance of permits to cross flood control infrastructure.
Maricopa County	Ground Disturbance Permit	Consider issuance of ground disturbance permit.
Maricopa Water District	Crossing Permits	Consider issuance of permits to cross water district roads.
	Planned Growth Consultation	Consultation of planned growth and infrastructure development.
Maricopa-Stanfield Irrigation District	Crossing Permits	Consider issuance of permit to cross existing infrastructure.
PINAL COUNTY, ARIZONA		
Air Quality Control District	Dust Permit	Consider issuance of dust control permits to contractors.
Department of Transportation	Crossing Permits	Consider issuance of road crossing permits for all state and county highway crossings.